

REMARKS

The Office Action dated June 12, 2003 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto. By this Response, Applicants have amended the specification to include section-headers as suggested in the Office Action. Claims 1-14 are pending in the application, and are respectfully submitted for consideration. No new matter has been added.

CLAIM REJECTIONS UNDER 35 USC § 103

Claims 1-4 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Sayers et al.* (U.S. Patent No. 6,539,237) in view of *Thomas* (U.S. Patent No. 6,421,339), and further in view of *Wallentin* (U.S. Patent No. 6,233,222).

The Office Action alleged that *Sayers* discloses all of the elements of the claimed invention, with the exception of “a gatekeeper connected to the gateway by a switch packet path” and “transmitting of candidate list to gatekeeper for handover.” The Office Action relied upon *Thomas* and *Wallentin* to allegedly cure the deficiencies of *Sayers*. Applicants respectfully submit that the prior art cited in the Office Action fails to teach, suggest or disclose the features of the claimed invention. Therefore, the rejection is respectfully traversed and reconsideration is respectfully requested for the reasons which follow.

Claim 1, upon which claims 2-7 are dependent, recites a cellular communications network comprising a plurality of gateways for controlling cells in the cellular

communications network. The gateways are arranged to receive RF information from at least one mobile station in the network. At least one gatekeeper may be connected to the gateways by a switched packet communication path. Each gateway includes means for generating a handover required indication for a call in which the gateway is engaged and packet generating means for generating a packet addressed to the gatekeeper. Control information comprises a candidate list of alternative cells to which the call could be transferred and the gatekeeper includes packet generating means for generating a packet for sending a handover request for handing over the call to one of the alternative cells.

Applicants submit that the prior art fails to disclose or suggest the elements of the invention as set forth in claims 1-4 and thereby fails to provide the critical and nonobvious advantages that are provided by the invention. To establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all of the claimed limitations. There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The teaching or suggestion to make the claimed combination must be found in the prior art, and not be based on Applicants' disclosure. See M.P.E.P. §§ 2143.01 and 2143.03.

Sayers discloses a communication system formed by a private network that includes a private wireless network. The communication system includes a public wireless network using a public wireless protocol, such as GSM, and includes public networks, such as PSTN, ISDN and the Internet, using a wired protocol, such as IP. The

private network also includes a local area network (LAN) and the private network connects to the public networks using a wired packet protocol, such as IP. The public and private wireless networks operate with the same public wireless protocol, such as GSM, and the private wireless network additionally operates with a wired packet protocol, such as IP. The communication system permits users to operate freely in both public and private wireless networks using standard mobile stations while achieving high private network data rates. The communication system uses normal wireless handsets or other mobile or fixed stations without need for any modifications.

Thomas discloses a method and apparatus for configuring an H.323 compliant data packet network with a registering function whereby home based users are identified separate from visiting users having other networks as home bases. Thus user location data may be retrieved and/or modified as those users roam to other H.323 compliant networks and register with a gatekeeper at that visited network. The registration of a visiting user with a visited gatekeeper includes the process of assigning a transient identity to the roaming user, obtaining confirmation from the home gatekeeper that roaming is authorized and registering the roaming users present address and transient identity at the home site so that calls received at the home network can be directed to the user at the visited site. In column 2, lines 31-34, *Thomas* explains that while such an action would be comparable to roaming users in cellular phone technology, the differences in basic construction of the internet and the telephone system prevent any direct correlation in processes to accomplish such authorization and forwarding of communications.

Wallentin discloses a telecommunications network has a target exchange (RNC 222₂) which determines a congestion condition in a region supervised by the target exchange, and which sends a congestion message to a source exchange (RNC 222₁). The source exchange controls at least some connections which utilize radio resources in the region supervised by the target exchange. The congestion message causes the source exchange to adjust at least one connection which it controls in the region supervised by the target exchange. In a first mode, the target exchange determines a selected connection to be adjusted in view of the congestion condition. In this first mode, the congestion message identifies the selected connection to be adjusted and further includes an adjustment value (e.g., power reduction value) for the selected connection to be adjusted. In a second mode, the congestion message includes an identification of a congested area (e.g., a cell) within the region supervised by the target exchange, as well as a severity value indicating a severity of the congestion in the congested area. The severity value can be indicative of a needed decrease in congestion in the congested area.

Applicants respectfully submit that *Sayers* fails to disclose several elements of the claims. As admitted in the Office Action, *Sayers* does not disclose or suggest “a gatekeeper connected to the gateway by a switch packet path” and “transmitting of candidate list to gatekeeper for handover.” *Sayer*, instead, relates to a communications system formed by a private network that includes a private wireless network. Referring to Figure 4, a hub links a number of private base stations (P-BTS). The hub is also connected to a gatekeeper which provides functions required to register mobile phones,

permits access to the network, translations of called numbers and the routing of calls if required. A router is also connected to the hub which allows access to the internet, and other networks via gateways. A method of implementing a handover from a serving P-BTS to a target P-BTS is disclosed, which involves passing a handover request internally within the P-BTS from an internal connection management layer to a packet data interface, generating a location request message and returning from the gatekeeper a location confirmation message. *Sayers* also involves the further steps of forwarding a handover message from the packet network interface, and receiving a handover acceptance message.

The Office Action relies upon *Thomas* to allegedly cure the first deficiency of *Sayer*. However, *Thomas* fails to cure the first deficiency of *Sayer*, which relates to “a gatekeeper connected to the gateway by a switch packet path.” First, *Thomas* is not relevant to the present invention. *Thomas* relates to a method for configuring a H.323 compliant data packet network such that if users roam they may register with a gatekeeper at a visited network. The Office Action takes the position that Packet Data Network 30 (Figure 1) is shown to be connecting a gateway to a gatekeeper, however it appears from Figure 1 that it is bus 16 or bus 36 that connects gateways to gatekeepers, and these buses are not disclosed as being packet switched. Therefore, *Thomas* does not disclose communication between mobile stations, and thus a gateway is not disclosed that receives RF information. Furthermore, a handover, which as explained in the present application is initiated when a mobile moves from one zone or cell to another, is not an

issue in a circuit with no mobile stations. No call handover is therefore mentioned in *Thomas*, and one skilled in the art would not have thought to refer to *Thomas* in relation to a method for implementing handovers in a network with mobile stations.

In addition, *Thomas* specifically teaches away from the present invention. In column 2, lines 31-34, *Thomas* discloses that its device is not comparable to roaming users in cellular phone technology. *Thomas* specifically states, “While such an action would be comparable to roaming users in cellular phone technology, the differences in basic construction of the internet and the telephone system prevent any direct correlation in processes to accomplish such authorization and forwarding of communications.”

The Office Action relies upon *Wallentin* to allegedly cure the second deficiency of *Sayer*. However, *Wallentin* fails to cure the second deficiency of *Sayer*, which relates to “transmitting of candidate list to gatekeeper for handover.” In contrast to the present invention, *Wallentin* relates to a telecommunications network with a number of Radio Network Controllers (RNCs), each connected to a number of Base Stations. If there is congestion in the network, a particular connection between a mobile station and the network may be adjusted. As described in column 11, lines 1-6, this may involve altering the bitrate of a connection, and subsequently updating the Bitrate field in a Connection Identity List, which lists details about each existing connection within the cell to which the list pertains. This list is not the same as the candidate list of alternative cells as recited in Claim 1. The candidate list of Claim 1 does not list individual connections, but lists alternatives cells to which the current call could be handed to.

Therefore, *Wallentin* is not relevant to the present application as there is no disclosure of a packet-switched portion, nor does it discuss in detail any apparatus for implementing a handover of a call from one cell to another, and certainly not an apparatus as claimed in Claim 1. Therefore one skilled in the art would not refer to *Wallentin* for teaching relating to handovers in networks with packet-switched portions.

For at least those reasons, *Sayers*, *Thomas* and *Wallentin*, taken in combination or alone, do not render independent claim 1 obvious, because the references do not disclose or suggest each and every element of the claims.

In addition, claims 2-4 depend from claim 1 and are therefore allowable at least for the reasons claim 1 is allowable, respectively, and for the specific limitations recited therein.

Claims 5-7 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Sayers et al.* in view of *Thomas* and further in view of *Hannula* (U.S. Patent No. 6,366,893). The Office Action alleged that the combination of *Sayers* and *Thomas* discloses all of the elements of the claimed invention, with the exception of "said data defining network specific resources defines GSM specific end system information." Applicants respectfully submit that the prior art cited in the Office Action fails to teach, suggest or disclose the features of the claimed invention. Therefore, the rejection is respectfully traversed and reconsideration is respectfully requested for the reasons which follow.

Hannula discloses a method and apparatus for performing electronic payment transactions between terminal equipment (100) in a telecommunication network and the other transacting party. *Hannula* utilizes a payment service gateway (10) through which all the payment transactions of the terminal equipments in the telecommunication network are routed. The payment service gateway allows the parties of the payment transaction to support different electronic payment protocols and performs the required protocol conversions so as to provide an end-to-end transaction.

The Office Action relies upon *Hannula* to allegedly cure the shortcomings of *Sayers* and *Thomas*. However, claims 5-7 depend from claim 1 and are therefore allowable at least for the same reasons that claim 1 is allowable. Thus, *Sayers*, *Thomas* and *Hannula*, taken in combination or alone, fail to render claims 5-7 obvious.

Claims 8-14 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Sayers et al.* in view of *Thomas* and further in view of *Hannula*. It appears that there is a typographical error in this rejection. Although the Office Action states, "Claims 8-14 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Sayers et al.* in view of *Thomas* and further in view of *Hannula*," it appears that the Office Action intended to reject the claims under 35 U.S.C. 103(a) as being unpatentable over *Sayers et al.* in view of *Thomas* and further in view of *Wallentin* since the arguments presented in the Office Action are based upon *Wallentin* instead of *Hannula*. If Applicants' assumption is incorrect, Applicants respectfully request clarification and the issuance of a new non-final Office Action.

Claim 8, upon which claims 9-14 are dependent, recites a method of effecting handoff of a call in which at least one mobile station is engaged in a cellular communications network comprising a plurality of cells. The method includes the steps of receiving, formulating and determining. The receiving step receives from the mobile station a handoff required indication indicating that a handover is needed from a source gateway to a target gateway. The formulating step formulates at the source gateway a packet addressed to a source gatekeeper. The packet includes control information comprising a candidate list identifying possible alternative gateways. At the source gatekeeper, the determining step determines to which of the target gateways a handoff request should be forwarded and formulates a packet for forwarding to the target gateway.

As discussed above, and admitted in the Office Action, *Sayers* does not disclose generating a packet addressed to a source gatekeeper that includes control information comprising a candidate list of alternative cells to which the call could possibly be transferred. Nor does *Sayers* teach that a gatekeeper comprises means for generating a handover request for handing over the call to one of the alternative cells. In *Sayers*, it is within the P-BTS that a handover message is forwarded, with no teaching as to where this message is generated. Furthermore, claim 8 recites that a handoff required indication (HR1) is received from a mobile station. This feature also is not disclosed by *Sayers*.

Wallentin, as explained above is not relevant to handovers between gateways (or in fact between RNCs), does not disclose the above-mentioned features of claim 8.

Wallentin does not disclose the candidate list of claim 8. As explained above, the Connection Identity List in *Wallentin*, which lists details about each existing connection within the cell to which the list pertains, is not in any way similar to the candidate list of Claim 1, which does not list individual connections, but lists alternatives cells to which the current call could be handed to. *Wallentin* does not disclose that a handoff required indication (HRI) is received from a mobile station. *Wallentin* also fails to disclose a gatekeeper, by which a handoff request is generated and forwarded to a target gateway.

For at least those reasons, *Sayers*, *Thomas* and *Wallentin*, taken in combination or alone, do not render independent claim 8 obvious, because the references do not disclose or suggest each and every element of the claims.

In addition, claims 9-14 depend from claim 1 and are therefore allowable at least for the reasons claim 8 is allowable, respectively, and for the specific limitations recited therein.

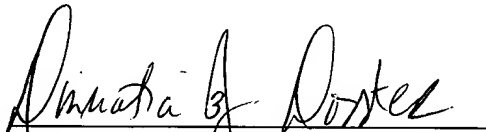
Thus, Applicants submit that certain clear and important distinctions exist between the cited prior art and the claimed invention. Applicants submit that these distinctions are more than sufficient to render the claims of the invention unanticipated by and unobvious in view of the prior art. It is therefore requested that claims 1-14 be found allowable, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by

telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Dinnatia J. Doster", is written over a horizontal line.

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Enclosures: Petition for Extension of Time